

## CENTRICAL

## **MODULAR TEST AND CALIBRATION SYSTEM**



CENTRICAL is a modular test and calibration system for workshops and laboratories. It offers efficient and ergonomic facilities for the maintenance of process instruments.



## BEAMEX **CENTRICAL** REFLECTS THE RESULT OF DECADES OF EXPERIENCE PROVIDING WORKSHOP CALIBRATION SOLUTIONS TO THE PROCESS INDUSTRY



### Ergonomic

The CENTRiCAL offers a very ergonomic way to work in a workshop. With the electrically adjusted tabled height, you can se the table to optimum working level. Having all the equipment ergonomically located in the bench improves the work efficiency.

ESD protected

sensitive items on the bench.

Calibrated

Even the CENTRiCAL is very modular, with the ready-made packages it is easy to configure and buy the kind of system that best suits you.

### Modular and versatile

Ready-made packages

The CENTRiCAL is a very modular and versatile solution, giving you the possibility to tailor the functionality to your needs. The CENTRiCAL can be used for a large variety of applications.

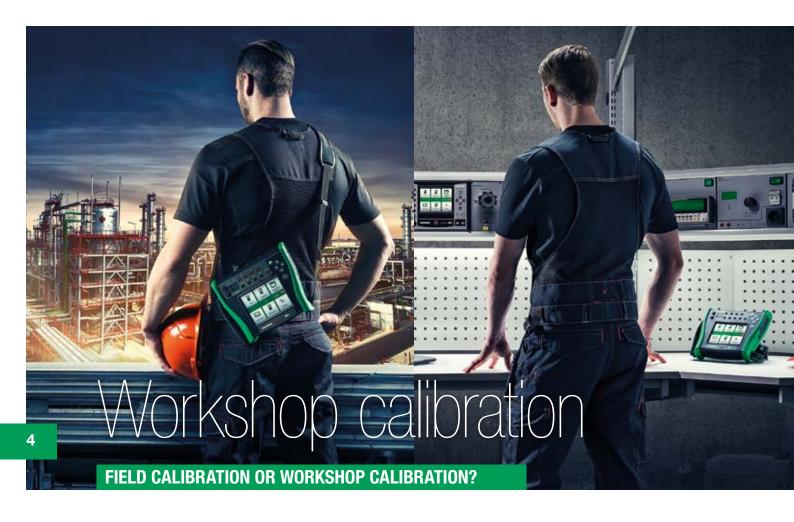
All the relevant modules delivered with CENTRiCAL are calibrated before delivery and come with calibration certificate included. You can start using the bench immediately without any need to have equipment calibrated first.

All components in the CENTRiCAL system are protected against

electrostatic discharge (ESD). It is safe to handle also ESD

### Ready assembled and tested

The benches are delivered ready assembled, so it is easy to take them into use without any need for separate assembly service.



## Sometimes the workshop calibration is more viable option.

In today's process industry, the field instruments are often calibrated out in the field, using portable calibration equipment. In some cases, the field calibration is the most suitable solution, but there are still various reasons why it is sometimes more convenient and effective to do calibration in a workshop.

The best practices combine workshop calibration and field calibration. These practices are not exclusive alternatives; instead, they complement each other. Beamex offers you the best tools for both practices.

**COMMISSIONING** It's a common situation that during the commissioning of a new plant or a part of the plant, the process equipment to be installed into the process have already been acquired and they are in the workshop waiting for the commissioning. With a properly equipped workshop, with all the equipment readily and ergonomically available, it is often faster and easier to calibrate the field equipment in the workshop, than using portable calibration tools. You can have your field equipment calibrated already before they are being installed.

**ACCURACY/UNCERTAINTY** It is typically easier to achieve a better accuracy and smaller uncertainty when the calibration is performed in the controlled environments in the workshop.

Portable calibration equipment may have accuracy compromised in order to kame them small and easily portable.

Workshop calibration equipment may be bigger but may also offer better accuracy. Also, the controlled environment in a workshop help to get better total uncertainty for the calibration.

**ROTATIONAL SPARES** It is often convenient to have rotary spare equipment for the process instruments. In case of something fails you can quickly replace it with a calibrated spare device. The calibration of spare devices is more convenient in a calibration workshop.

**ERGONOMIC / CONVENIENT** In a workshop, all necessary equipment is always in place and ready to be used. Equipment never gets lost when they are mounted on a panel. No time wasted in searching the tools needed.

While workshop equipment normally runs on mains voltage, so there's no need to charge batteries before the work. All equipment is ergonomically located in the test bench panel, with a motorized table for optimum ergonomics.

**ENVIRONMENTAL CONDITIONS/SAFETY** While field conditions can sometimes be very harsh to work in with extreme temperatures, humidity, dust and noise. Field conditions may also be dangerous for the workers. The workshop conditions are convenient for the worker and equipment.



## The calibration host module, MC6 Workstation, in the CENTRiCAL is part of the Beamex Integrated Calibration Solution.

The process begins when a work-order is created in your maintenance management system and is automatically sent to the calibration software to select the associated calibration procedures.

Then, the **device information** and **calibration procedures** are sent to a documenting calibrator or tablet and the calibration work is performed.

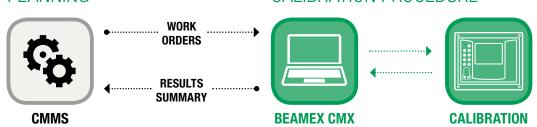
Next, the device **automatically documents** the results. Finally, the results are transferred back to the calibration software for storage, and the work order is digitally closed in your maintenance management system.

When upgrading from a traditional calibration system to integrated calibration system, you **automate the calibration process** and eliminate all error-prone manual steps.

Upgrading to integrated calibration system typically decreases the time spent on the entire calibration process by 50%, while improving the quality of calibration records and ensuring quick and easy retrieval for audits.

### **PLANNING**

### CALIBRATION PROCEDURE



## Table solutions

Configuring your CENTRiCAL starts with the selection of the table. CENTRiCAL is available as a motorized bench with the table height being electronically adjustable for optimum ergonomic height. In case you don't need adjustable height, a fixed height table is also available. A corner unit is available to be installed between two tables making it a corner bench. A mobile trolley is an option in case you want to be able easily move the equipment around the workshop.

**CENTRICAL TABLES** 

### CENTRICAL M

### MOTORIZED BENCH

CENTRICAL M is a 2 meter long bench with the table height being electronically adjustable for optimum ergonomic height. Use the table as itself or combine two tables with the corner unit in between for a corner solution.

### Workshop bench 2000 mm x 800 mm ESD, height adjustable 740–1190 mm (max load 320 kg), including:

- durable 30 mm bench top (chipboard core with 0.8 mm HPL-layers, sides with 3 mm plastic edges DIN EN 61340)
- bench ESD-features: ESD grounding box + crocodile-clip cord + press studs + wristband, table-top mat, legs with conductive levellers
- 2pcs lifting columns, adjustment speed 9 mm/s (anticollision), up/down control in the front of left bench frame (benches interconnected)
- standard flaps (left + right) with high-quality hinges and gapless closing
- perforated backplane between extensions for high stability, height 250 mm, light grey
- Instrument Panel, width 2000 mm, 14 MP, colour RAL7016 (fine-structure anthracite), depth 300 mm
- Shelf 2000 mm x 400 mm on top of the Instrument Panel with integrated premium LED workstation lamp dimmable 1800 mm
- adjustable brightness 0–100% and color temperature 2700K–6000K with double rocker switches

- luminous flux (brightness) 1700 lm (>4500 lux at 500 mm distance)
- color reproduction RA >80, with diffusor for homogenous shade-free illumination
- body 320° tiltable, emitting angle 120°

#### **Function board including:**

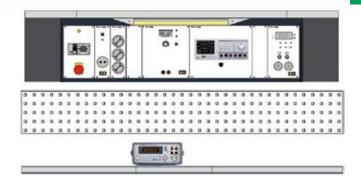
- 2 pcs dual power socket panels (on left and right side (same type as the bench power socket))
- interface module 1 x USB socket for charging, with silkscreen printing "Charging only"
- 2 pcs IT-sockets (same type as the bench power socket)
- USB-socket MC6WS -> PC (connector plugged if no MC6WS is installed in the bench)
- USB-socket POC8 -> MC6WS (on the side where POC8 is installed, connector plugged if no POC8)
- vacuum pump power socket, connected to vacuum pump switch (on the side where POC8/vacuum pump is installed)
- plastic storage bins (size 7) with bin bar holder, 160 x 105 x 75 mm (L x W x H), black ESD, set of 5 pcs
- 12 pcs of tool holders for perforated backplane
- power cord 3 m with angled schuko plug



### CENTRICAL CM

### MOTORIZED CORNER BENCH

CENTRICAL CM is a corner bench with the table height being electronically adjustable for optimum ergonomic height. Use the corner bench between two CENTRICAL M tables for a corner solution.



### Corner bench 1035 mm x 1035 mm ESD, height-adjustable, including:

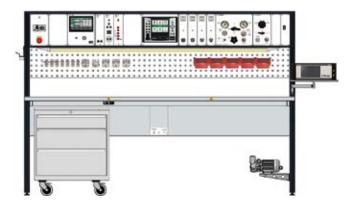
- durable 30 mm bench top (chipboard core with 0.8 mm HPL-layers, sides with 3 mm plastic edges DIN EN 61340)
- bench ESD-features: ESD grounding box + crocodile-clip cord + press studs + wristband, table-top mat, legs with conductive levellers
- perforated backplane for corner element, height 250 mm, light grey
- Instrument Panel 7.5 MP, depth 300 mm, colour RAL7016 ESD (fine-structure anthracite)
- Shelf on top of the Instrument Panel with integrated premium LED workstation lamp dimmable 600 mm

- adjustable brightness 0–100% and color temperature 2700K–6000K with double rocker switches or IMOD Control Unit
- color reproduction RA >80, with diffusor for homogenous shade-free illumination
- body 320° tiltable, emitting angle 120°
- Function Board
- power cord 3 m with angled schuko plug

### CENTRICAL F

### FIXED HEIGHT BENCH

CENTRICAL F is a 2 meter long bench with fixed table height. Use the table as itself or combine two tables with the corner unit in between for a corner solution.



### Workshop bench 2000 mm x 800 mm ESD, fixed 780 mm height, including:

- durable 30 mm bench top (chipboard core with 0.8 mm HPL-layers, sides with 3mm plastic edges DIN EN 61340)
- bench ESD-features: ESD grounding box + crocodile-clip cord, press studs + wristband, table-top mat, conductive leg levellers
- standard flaps (left + right) with high-quality hinges and gapless closing
- perforated backplane between extensions for high stability, height 250 mm, light grey
- cable support with bow and integrated cable comb, in 3mm aluminium, for laboratory and power cords
- Instrument Panel, width 2000 mm, 14 MP, colour RAL7016 (fine-structure anthracite), depth 300 mm

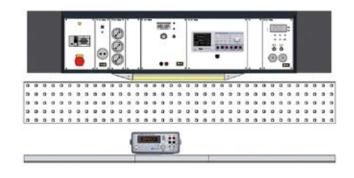
#### **Function board including:**

- 2 pcs dual power socket panels (on left and right side (same type as the bench power socket))
- interface module 1 x USB socket for charging, with silkscreen printing "Charging only"
- 2 pcs IT-sockets (same type as the bench power socket)
- USB-socket MC6WS PC-comm. (connector plugged if no MC6WS is installed in the bench)
- USB-socket POC8 -> MC6WS (on the side where POC8 is installed, connector plugged if no POC8)
- vacuum pump power socket connected to vacuum pump switch (on the side where POC8/vacuum pump is installed)
- Premium LED workstation lamp dimmable 1800 mm (mounted under Instrument Panel)
- plastic storage bins (size 7) with bin bar holder, 160 x 105 x 75 mm (L x W x H), black ESD, set of 5 pcs
- 12 pcs of tool holders for perforated backplane
- power cord 3 m with angled schuko plug

### CENTRICAL CF

### FIXED HEIGHT CORNER BENCH

CENTRICAL CF is a corner bench with fixed height. Use the corner bench between two CENTRICAL F tables for a corner solution.



### Complete fixed height corner bench 1035 mm x 1035 mm ESD, fixed 780mm height, including:

- durable 30mm bench top (chipboard core with 0.8 mm HPL-layers, sides with durable 3mm plastic edges DIN EN 61340)
- bench ESD-features: ESD grounding box + crocodile-clip cord + press studs + wristband, table-top mat, legs with conductive levellers
- Instrument Panel 7.5 MP, depth 300 mm, colour RAL7016 ESD (fine-structure anthracite)
- perforated backplane for corner element, height 250 mm, light grey
- Function Board
- Premium LED workstation lamp dimmable 600 mm (mounted under Instrument Panel)

- adjustable brightness 0–100% and color temperature 2700K - 6000K with double rocker switches or IMOD Control Unit
- color reproduction RA >80, with diffusor for homogenous shade-free illumination
- body 320° tiltable, emitting angle 120°
- power cord 3 m with angled schuko plug

PLEASE NOTE: Can be installed only between two fixedheight straight benches (9975000)

### CENTRICAL TR

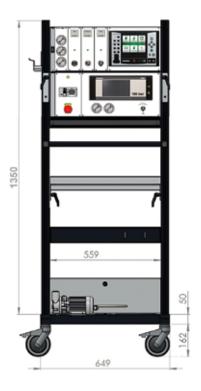
### **MOBILE TROLLEY**

CENTRICAL TR is a mobile trolley offering a mobile solution.

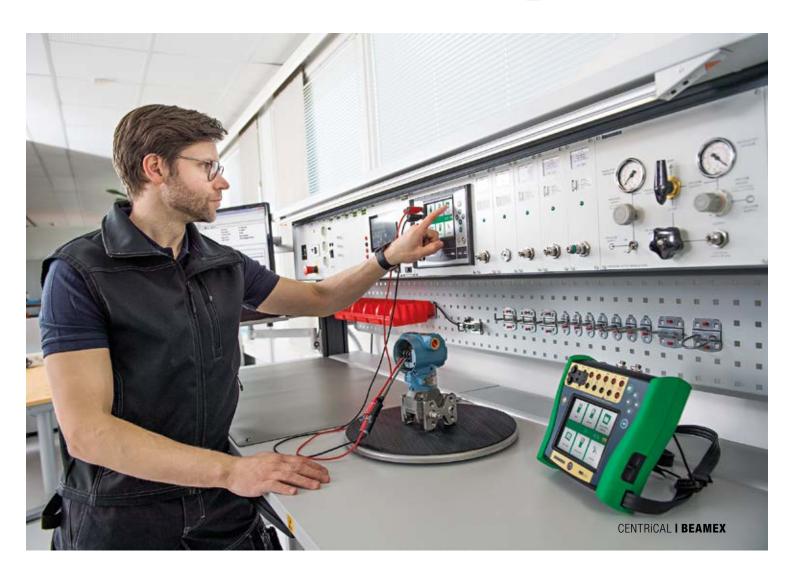
The mobile trolley can be provided with the same modules as the benches.

### **Beamex Mobile Calibration Rack including:**

- ESD caster wheels, diameter 125 mm
- holder for gas cylinder max height 1065 mm, diameter 140–204 mm
- durable 30 mm shelf (W x H) 559 x 500 mm (chipboard core with 0.8 mm HPL-layers, sides with 3mm plastic edges DIN EN 61340)



## CENTRICAL





## Multifunction process calibrator Beamex MC6 Workstation – Calibration host module

Beamex MC6 workstation is an advanced, high-accuracy calibrator and communicator. It offers calibration capabilities for pressure, temperature and various electrical signals. The MC6 also contains a full fieldbus communicator for HART, FOUNDATION Fieldbus and Profibus PA instruments.

The usability and ease-of-use are among the main features of the MC6. It has a large 5.7" color touch-screen with a multilingual user interface.

The MC6 is one device with several different operation modes, which means that it is fast and easy to use. The operation modes are: meter, calibrator, documenting calibrator, data logger and fieldbus communicator.

MC6 communicates with automatic pressure controllers and temperature dry blocks enabling fully automatic calibration.

In addition, the MC6 communicates with Beamex CMX calibration software, enabling paperless calibration.



#### Summary of measurement, generation and simulation functions

- Pressure measurement
- Voltage measurement and generation
- Current measurement and generation
- Frequency measurement and generation
- Pulse counting and generation
- Switch state sensing
- Built-in 24 VDC loop supply
- Resistance measurement (two simultaneous channels) and simulation

- RTD measurement (two simultaneous channels) and simulation
- TC measurement (two simultaneous channels) and simulation
- HART communicator
- FOUNDATION Fieldbus communicator
- Profibus PA communicator









### Pressure Measurement Modules

The pressure modules ranging from –1 to 600 bar incorporate advanced pressure measurement technology resulting in only a few modules being required to cover a wide pressure range with excellent uncertainty.

The barometric module measures the ambient barometric pressure. When the barometric module is incorporated in the system, the ranges of all other pressure measurement modules can be displayed both in gauge and absolute pressure.

The read out from pressure modules is displayed in the MC6.



PRESSURE MODULE	UNIT	RANGE
PB	kPa a mbar a psi a	70 to 120 700 to 1200 10.15 to 17.4
P10mD	kPa diff mbar diff iwc diff	±1 ±10 ±4
P100m	kPa mbar iwc	0 to 10 0 to 100 0 to 40
P400mC	kPa mbar iwc	±40 ±400 ±160
P1C	kPa bar psi	±100 ±1 –14.5 to 15
P2C	kPa bar psi	-100 to 200 -1 to 2 -14.5 to 30
P6C	kPa bar psi	-100 to 600 -1 to 6 -14.5 to 90

PRESSURE MODULE	UNIT	RANGE
P20C	kPa bar psi	-100 to 2000 -1 to 20 -14.5 to 300
P60	kPa bar psi	0 to 6000 0 to 60 0 to 900
P100	MPa bar psi	0 to 10 0 to 100 0 to 1500
P160	MPa bar psi	0 to 16 0 to 160 0 to 2400
P250	MPa bar psi	0 to 25 0 to 250 0 to 3700
P600	MPa bar psi	0 to 60 0 to 600 0 to 9000
EXT1000	MPa bar psi	0 to 100 0 to 1000 0 to 15000



### Pressure Output Modules

The PO modules are designed to regulate vacuum and pressure sources with high precision. For pressures up to 20 bar (290 psi), a regulator in combination with an adjustable volume is used to help achieve the exact pressure. The high-pressure module is provided with high-pressure regulator combined with ball valves for coarse adjustment and needle valves for fine adjustment.

MODULE	RANGE	
P08C	-1 to 8 bar g / -14.5 to 116 psi	
P020	0 to 20 bar g / 0 to 290 psi	
P0210	0 to 210 bar q / 0 to 3045 psi	





### Automatic pressure controller Beamex POC8

Beamex POC8 is an accurate and user-friendly automatic pressure controller, providing regulated output from vacuum to 210 bar (3045 psi). POC8 is designed for applications requiring automatic pressure testing and calibration. POC8 communicates with Beamex MC6 calibration host module (optional). POC8 automatically regulates the pressure output signal according to commands from MC6, enabling fully automated calibration of pressure transmitters and other pressure instruments.



FEATURE	SPECIFICATION
Output range	± 1 bar (±14.5 psi) -1 to 6 bar (-14.5 to 87 psi) -1 to 20 bar (-14.5 to 290 psi) -1 to 100 bar (-14.5 to 1450 psi) -1 to 210 bar (-14.5 to 3045 psi) Special range within -1 to 210 bar (-14.5 to 3045 psi)

## IVOD - Intelligent and modular control unit

The IMOD is the central control unit that controls up to 5 connected modules such as multimeter, function generation, laboratory power supply and AC power supply.

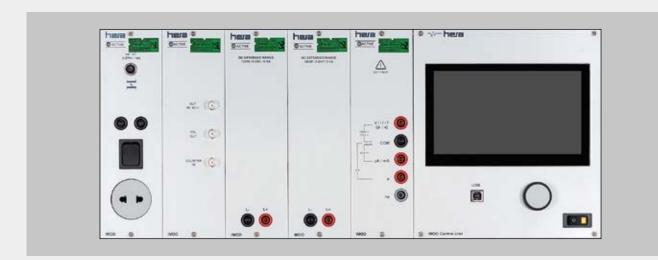
The large 7-inch touch screen in the IMOD makes it easy to use.

### 1. IMOD Control Unit (IMOD\_CU)

IMOD control-unit TOUCH, 7" TFT-display (800x480), capacitive touch panel and rotary switch dial operation, USB-interface in front panel, LAN-interface at the rear panel, with illuminated switch, 1.5 MP wide, Slected options Defines functionality

### 2. Lab Power Supply (IMOD\_DC)

IMOD lab power supply extended range 160 W (SMPS), 0–84 V / 0–5 A, 2-channel, accuracy <0.2%, overvoltage protection, 0.5 MP wide (functional unit in separate housing), IMOD\_CU can be eguippet with 2 PCS of IMOD\_DC UNIT, serial connection 0–168 V / 0–5 A , Parallel connection 0–84 V / 0–10 A.



### 3. AC sources (IMOD\_AC)

IMOD AC-source, 1-phase, 0-270 V / 0-10 A floating, motor-driven variac, thermomagnetic fuse, output 4mm jacks and universal socket, floating, with output switch, 0.5 MP wide (functional unit in separate housing)

### 4. Multimeter (IMOD\_MM)

IMOD multimeter, voltages and currents DC/AC, resistance, frequency, capacitance, diode test, continuity test, manual and automatic range selection, 0.5 MP wide

### 5. Function Generator (IMOD\_FG)

IMOD function generator, sinus, triangle, saw-tooth, pulse and DC voltage, output 3 x BNC-sockets, 0.5 MP wide

### Electrical modules

### MAINS (AC) POWER SUPPLIES

MAINS120	MAINS230	MAINS240UK	MAINS230CH	MAINS230AUS
Mains module 15A 1-phase 120 V/240 V, with emergency stop (rotation release) and RCD 25A/35mA type A (pulsating currents)	Mains module 16 A 1-phase 230 V, with emergency stop (rotation release) and RCD 25 A/35 mA type A (pulsating currents)	Mains module 13 A 1-phase 240 V UK, with emergency stop (rotation release) and RCD 25 A/35 mA type A (pulsating currents)	Mains module 10 A CH 1-phase 230 V, with emergency stop (rotation release) and RCD 25 A / 35 mA type A (pulsating currents)	Mains module 10 A 1-phase 240 V AUS, with emergency stop (rotation release) and RCD 25 A / 35 mA type A (pulsating currents)
Order code: 9975510	Order code: 9975520	Order code: 9975530	Order code: 9975515	Order code: 9975525
Width: 1 MP	Width: 1 MP	Width: 1 MP	Width: 1 MP	Width: 1 MP
120V	230V	2400	230V	230V

### DC POWER SUPPLIES

FDC24	LPS3002	LPS8405
Fixed 24 VDC/1.5 A stabilized voltage source, galvanically isolated, output 4 mm safety jacks, with illuminated switch	Compact laboratory variable power supply, 0–30 V/0–2 A, 4-digit high-contrast LED display, in-phase controlled, isolated and short circuit-proof, selector switch for voltage/current	Laboratory power supply, extended range 160 W (SMPS), 2-channel, 0-84 V/0-5 A, accuracy <0.2%
Order code: 9975535	Order code: 9975550	Order code: 9975555
Width: 0.5 MP	Width: 1 MP	Width: 1.5 MP
D -y- Plates D		

### **Multimeters**

#### **DMM16**

Gossen Metrawatt

 multimeter,
 incl. power supply,
 as MP-module



#### HMC8012

 Rohde & Schwarz HMC8012 TRMS digital multimeter 5 3/4 digits, mounted in channel

#### M3510A

Picotest Precision digital multimeter 6.5 digit,
 TrueRMS, dual display, USB, DC basic accuracy
 0.012% as separate unit

#### FK8845A

 Fluke digital TRMS precision multimeter, 6.5 digit, DC basic accuracy 0.004%, as separate unit

### Oscilloscopes



### GDS2102A

GW Instek Digital storage oscilloscope 100 MHz,
 2-channel, 8" TFT display, USB-interface, 3 MP wide

### GDS2202A

GW Instek Digital storage oscilloscope 200MHz,
 2-channel, 8" TFT display, USB-interface, 3 MP wide

### Function generators



#### DFG20

 DDS function generator LC with power amplifier, 6-digit LCD display, 20 MHz, with USB-interface, 2 MP wide

### Soldering

#### **SDRS200**

- Soldering and desoldering repair station 200 W, antistatic
- Soldering and desoldering repair station UNIVERSAL, 2-channel, temperature regulation 50 °C-500 °C, with integrated rotary pump for desoldering vacuum, LCDdisplay and illuminated switch
- FIT FITT CT
- Soldering iron 80 W with safety holder, antistatic
- Desoldering iron 80 W, with safety holder and cleaning set, antistatic
- Hot air pencil 100 W, with safety holder and nozzle changing tool, antistatic
- Soldering tips (set on 10 pcs 2.4 mm tips, other sizes available)

#### SDRS200US

- Soldering and desoldering repair station 200 W, antistatic
- Soldering and desoldering repair station UNIVERSAL, 2-channel, temperature regulation 50 °C-500 °C, with integrated rotary pump for desoldering vacuum, LCD-display and illuminated switch, with 115 V transformer
- · Soldering iron 80 W with safety holder, antistatic
- Desoldering iron 80 W, with safety holder and cleaning set, antistatic
- Hot air pencil 100 W, with safety holder and nozzle changing tool, antistatic
- Soldering tips (set on 10 pcs 2.4 mm tips, other sizes available)

#### **SST80**

- ERSA Soldering station 80 W, antistatic
- ERSA Soldering station 80 W, temperature regulation 150 °C-450 °C, LCD-display with nominal and actual temperature, fast antistatic soldering tool with safety holder, illuminated switch 1 MP
- Soldering tips 2.0 mm

#### FT12KIT

- · Weller direct soldering fume extraction kit 70W
- Direct soldering fume extraction, integrated vacuum pump with maintenance-free motor, connection for two soldering tools, fine particle pre-filter F7, particle filter H13 and active carbon gas filter
- Clip-on set for soldering tool
- Set of replacement filters, consist of Compact filter H13 + 3 x pre-filter F7

### Isolation transformers

#### ITR115

• 115 VA/0.5 A to 230 V isolated transformer, Schuko output, with thermomagnetic fuse, 0.5 MP wide

#### **ITR700**

 230 VA/3 A to 230 V isolated transformer, Schuko output, with thermomagnetic fuse, 0.5 MP wide

### Vacuum pumps

#### VACU115 / VACU230

- Vacuum pump kit PB0004 B 115 V/230 V
- Vacuum pump Busch PB0004 B 115 V/230 V with PROFI support
- Illuminated switch, 2 poles, with silk-screen print "VACUUM PUMP"
- Vacuum pump oil VM100 (in 2.5 deciliter plastic bottle), temp. range 12...30 °C
- · Connectors and tubing
- 20mbar abs must be possible, with back-pressure valve for preventing oil contamination, system to be tested



### Accessories

#### BLP05

• MP blank panel, width 0.5 MP, light grey

### BLP10

• MP blank panel, width 1 MP, light grey

### BLP15

• MP blank panel, width 1.5 MP, light grey

### BLP20

• MP blank panel, width 2 MP, light grey

#### RI PAC

• MP blank panel, width 4 MP, light grey

#### **PCHOLD**

 PROFI PC support for fixed height bench, suspended, adjustable width 160–210 mm, depth 440 mm, ESD

#### **PCHOLDL**

 PROFI PC support for C-Lift bench, suspended, adjustable width 160–210 mm, depth 440 mm, ESD

### **DBHOLD**

 Extendable shelf board for Dry-blocks or PC-units, depth 550mm, full extension, 45kg load capacity, ESD

### **LCDHOLD**

 PROFI LCD-display support, VESA-adapter for 100 mm/75 mm, double-arm swivel with ball joint and integrated cable holder, 450 mm reach, max 10 kg load non ESD

### **KEYBXT**

 Keyboard extension with mouse pad ESD, 279 mm extension with locking, black

#### **HCHAIR**

ESD swivel chair SHAPE, black fabric, ST Syncro tension

### **TOOLCAB**

 Stainless steel tool cabinet ESD, with lock and 4 pcs steel shelf boards, 1950 mm height, 400 mm depth, colour light grey

### **TOOLTRL**

 Sheet steel mobile container 564 mm x 670 mm x 572 mm (W x H x D), light grey ESD, 3 drawers with lock, grooved rubber mat on top, 50 kg load per drawer, colour light grey, with conductive casters

#### SHELF20

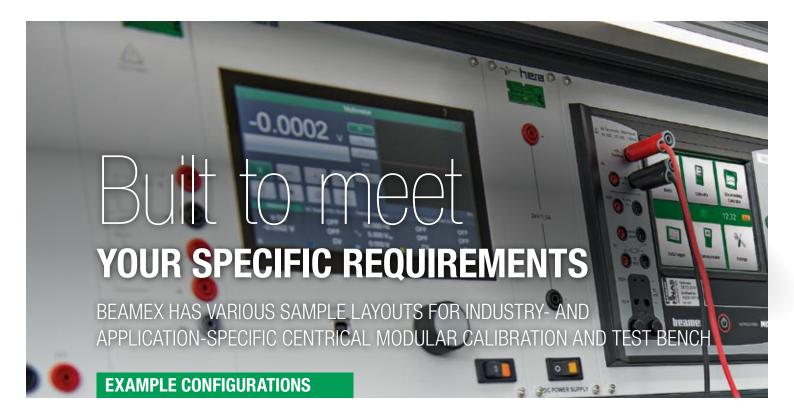
 PROFI sheet steel swivel shelf, 2000 mm x 400 mm, between MULTI-columns, ESD, colour light grey

### THOLD18

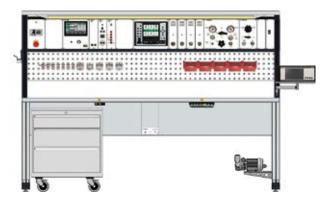
• Extra holders for perforated backplane 18pcs

### **MEASACC**

 Set of measurement accessories, probes, test leads + clips



### 1. PRESSURE CALIBRATION BENCH

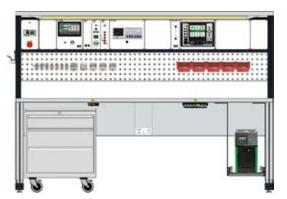


Highly accurate pressure calibration facility for ranges from vacuum to 1000 bar.

### **APPLICATIONS**

- Periodic calibration of process instruments, such as:
  - Pressure transmitters, sensors, gauges, switches, recorders
  - Differential pressure transmitters
  - I/P converters
  - HART, Profibus PA, FOUNDATION Fieldbus instruments

### 2. TEMPERATURE CALIBRATION BENCH



Efficient calibration of temperature and electrical instruments.

### **APPLICATIONS**

- Periodic calibration of process instruments, such as:
  - Temperature transmitters, sensors, indicators, switches, recorders
  - Thermocouples and RTD's
  - Electrical limit switches
  - Frequency meters, tachometers, pulse meters
  - HART, Profibus PA, FOUNDATION Fieldbus instruments



### 3. ELECTRICAL AND ELECTRONIC REPAIR BENCH



### ESD-protected facility for safe handling of PCBs and components.

### **APPLICATIONS**

- Testing and maintenance of electrical and electronic devices
- Soldering and de-soldering of surface- mounted and traditional electronic components





### Movable trolley with accurate and versatile calibration modules.

### **APPLICATIONS**

- Periodic calibration of process instruments, such as:
  - Pressure transmitters, sensors, gauges, switches, recorders, I/P converters
  - Temperature transmitters, sensors, indicators, switches, recorders
  - Thermocouples and RTD's
  - Electrical limit switches
  - Frequency meters, tachometers, pulse meters
  - HART, Profibus PA, FOUNDATION Fieldbus instruments



# A BETTER WAY TO CALIBRATE